

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: DURHAM RESERVOIR	Lake Area (ha): 4.37
Town: DURHAM	Maximum depth (m): 3.9
County: Strafford	Mean depth (m): 1.7
River Basin: Coastal	Volume (m ³): 76500
Latitude: 43°08'40" N	Relative depth: 1.7
Longitude: 70°56'24" W	Shore configuration: 2.43
Elevation (ft): 90	Areal water load (m/yr): 16.31
Shore length (m): 1800	Flushing rate (yr ⁻¹): 9.30
Watershed area (ha): 148.2	P retention coeff.: 0.50
% watershed ponded: 0.0	Lake type: artificial

BIOLOGICAL:

13 February 1996

27 July 1995

DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	ANABAENA 70%
	#2		CERATIUM 20%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			7.96
DOM. ZOOPLANKTON (% TOTAL)	#1	DOMINATED BY CILIATES	KELICOTTIA 52%
	#2		NAUPLIUS LARVA 18%
	#3		CONOCHILUS 11%
ROTIFERS/LITER		14	180
MICROCRUSTACEA/LITER		<1	81
ZOOPLANKTON ABUNDANCE (#/L)		56	261
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			2.7
BOTTOM DISSOLVED OXYGEN (mg/L)		2.4	1.0
BACTERIA (E. coli, #/100 ml)	#1		28
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:		Lake: DURHAM RESERVOIR Town: DURHAM			
	13 February 1996		27 July 1995		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	6.2	6.4	7.4		6.8
A.N.C. (Alkalinity)	13.2	21.7	17.7		22.8
NITRATE NITROGEN	0.22	0.11	< 0.10		< 0.10
TOTAL KJELDAHL NITROGEN	0.40	0.60	0.55		0.67
TOTAL PHOSPHORUS	0.023	0.040	0.011		0.033
CONDUCTIVITY (μ mhos/cm)	157.4	164.5	168.2		166.6
APPARENT COLOR (cpu)	115	115	48		100
MAGNESIUM			2.12		
CALCIUM			8.5		
SODIUM			20.3		
POTASSIUM			1.26		
CHLORIDE	33	31	37		34
SULFATE			7		7
TN : TP	27	18	50		20
CALCITE SATURATION INDEX			1.7		
All results in mg/L unless indicated otherwise					
TROPHIC CLASSIFICATION: 1995					
	D.O.	S.D.	PLANT	CHL	TOTAL CLASS
	**	3	5	1	9 Meso.
COMMENTS:					
<ol style="list-style-type: none"> Also known as Reservoir Pond and Old Durham Reservoir. This is not a drinking water reservoir; the town uses the Oyster River and a well for its public water supply. This is a shallow artificial pond with abundant macrophyte growth and phytoplankton dominated by blue green algae. Chloride and conductivity values suggest salt runoff from roads. 					

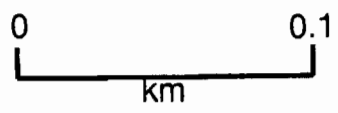
Durham Reservoir
Durham

road

5



5 foot depth contours

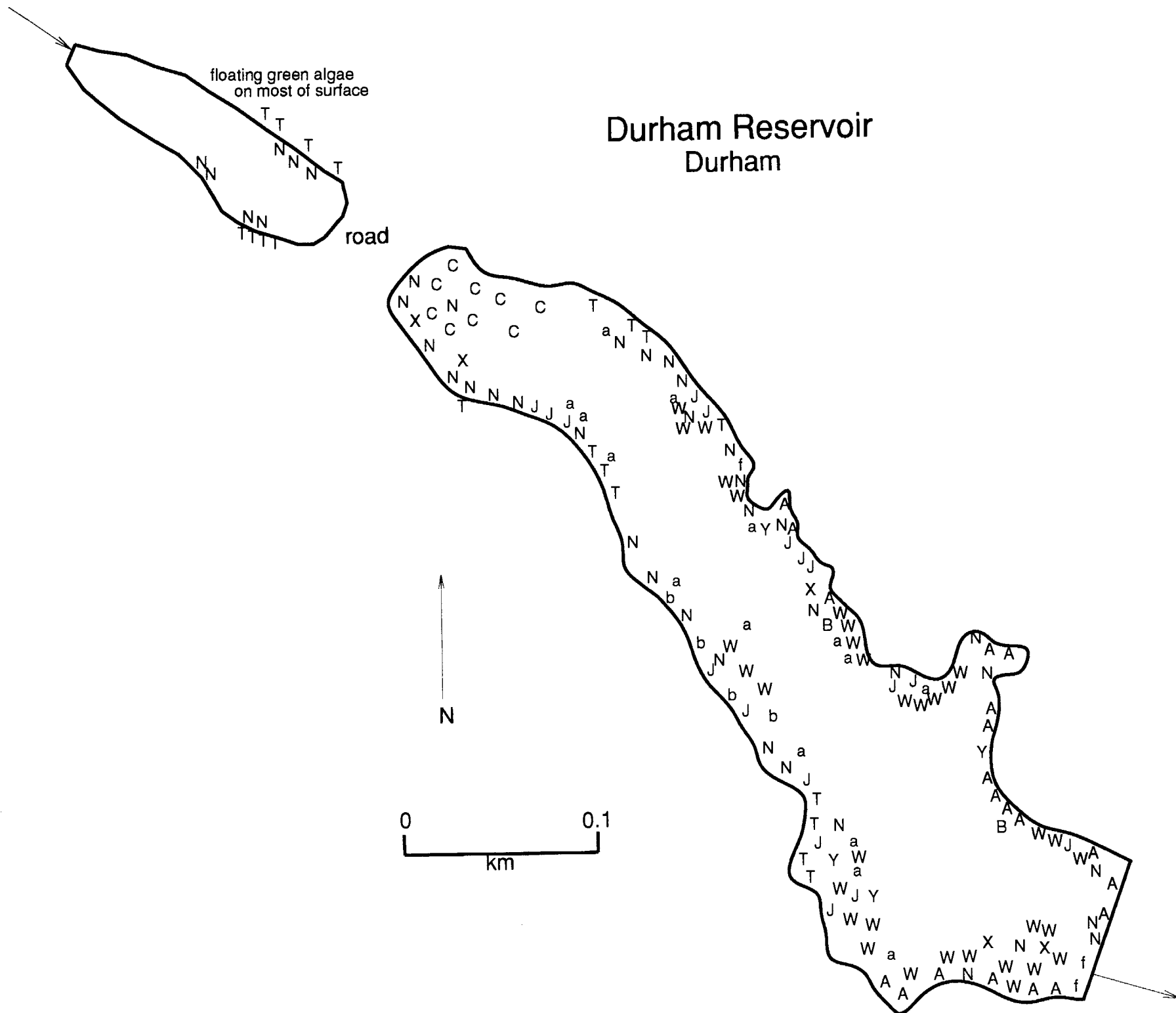


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*13'

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